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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/579,309

Filing Date: May 25, 2000

Appellant(s): BELL, RUSSELL W.

Russell Bell
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 12, 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-33 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) ClaimsAppealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,252,878 Locklear, Jr. et al. 6-2001

6,370,656 Olarig et al. 4-2002

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7, 13-19, 24-26, and 28-33 are rejected under 35 U.S.C. 102. Claims 8-10, 20-22, and 27 rejected under 35 U.S.C. 103. This rejection is set forth in prior Office Actions, Paper No. 8.

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2. Claims 1-7,13-19,24-26, and 28-33 rejected under 35 U.S.C. 102(e) as being anticipated by Locklear, Jr. et al. U.S. Patent 6,252,878.

3. Referring to claims 1,13, and 28, Locklear reference a first computer (e.g. server 16 of figure 1), a first communication device (LAN 11F, 110 of Figure 2) electrically coupled to the first computer configured to provide communications over a LAN (connection between server 16

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

and LAN 40 of the figure 1), the first communication device in communication with a WAN (connection between server 16 and data network 18 of the figure 1) via a first communication link (link 52 of the figure 1); a second computer (Figure 1; devices 14); and a second communication device electrically coupled to the second computer configured to provide communications over the LAN between the second and the first computers (Figure I, communication between server 16 and devices 14), wherein The first computer is configured to assign at least one virtual connection for each of the first and second computers to enable the first computer to route WAN data traffic across the LAN (Figures 1,2, and 3A; col. 5, lines 37 through col. 6, lines 21).

4. Referring to claims 2, and 14, Locklear reference further discloses the first communication link comprises a xDSL communication link (col. 2, last paragraph through col. 3, 1st paragraph).
5. Referring to claims 3,15, and 29, Locklear reference further discloses local area network (LAN) data signals are transmitted via frequencies greater than 1 MHz (col. 3, 2nd paragraph).
6. Referring to claims 4, and 16, Locklear reference further discloses the first computer manages simultaneous data transfers between both itself and the second computer over the first communication link (Abstract; col. 4, lines 43-67; and col. 5, lines 47-53).
7. Referring to claims 5,17, and 31, Locklear reference disclose the at least one virtual connection is identified and managed via an asynchronous transfer mode (ATM) protocol (col. 3, lines 6-35).

8. Referring to claims 6, and 18, Locklear reference disclose local area network (LAN) data signals are transmitted via frequencies less than 1 MHz and wherein the frequencies fall between identified xDSL frequencies (col. 2, last paragraph through col. 3, 1st paragraph).

9. Referring to claims 7,19, and 30, Locklear reference disclose each of the first and second computers are configured with a first and second communication device respectively, each of the first and second communication devices configured to enable local area network (LAN) communications between the first and second computers and wherein each of the first and second communication devices in cooperation with their respective computer is configured to assign at least one virtual connection for each of the first and second computers to enable either of the first and second computers to route wide area network (WAN) data traffic across the LAN (Figures 1, and 2; col. 1, lines 11-16; col. 4, lines 22-33; and col. 5, lines 37-58).

10. Referring to claims 24-26, Locklear reference disclose a transfers are completed via a wireless network link, the wide area network (WAN) is the Internet, and the wide area network (WAN) is a private network (Figure 1).

11. Referring to claim 32, Locklear reference disclose the asynchronous transfer mode (ATM) protocol uses an assigned virtual connection to accomplish data transfers to local area network (LAN) connected devices (Figures 1, and 2; col. 1, lines 11-16; col. 3, lines 6-35, col. 4, lines 22-33; and col. 5, lines 37-58).

12. Referring to claim 33, Locklear reference disclose the asynchronous transfer mode (ATM) protocol uses the combination of a terminal control protocol (TCP) and an Internet protocol (IP) address to identify a destination device on the wide area network (WAN) (Figures 1, and 2; col. 1, lines 11-16; col. 3, lines 6-35, col. 4, lines 22-33; and col. 5, lines 37-58).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 8-10, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Locklear in view of Olarig et al. U.S. Patent 6,370,656.

15. Referring to claims 8-10, and 20-22, Locklear reference disclose a first computer configured to provide communications over a LAN; however, Locklear reference fail to disclose a master computer and a slave computer are selected from the first and second computers using one or more initialization algorithms, the slave computer is configured to reconfigure the local area network (LAN) upon detecting a master computer failure, and master computer applies a set of rules derived from a group of parameters consisting of access, traffic rates, and time-of-day when assigning the at least one virtual connection to each of the master.

Olarig discloses a system including a primary computer and backup computer wherein these computers are configured as a master computer ;and slave computer in fault tolerant system.

In Olarig's invention, the backup computer is re-configured/switched-over in case of failure by detecting/transmitting the heartbeat to primary computer wherein the heartbeat is used to detect the status of an intended computer (col. 1, lines 41 through col. 2, lines 43). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to

add a fault tolerant architecture as seen in Olarig's invention into Locklear's invention for a mastercomputer and a slave computer are selected from the first and second computers because it would enable to provide a fault tolerant systems that are designed to operate essentially without interruption.

16. Claims 11,12, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Locklear.

Referring to claims 11,12, and 23, Locklear reference disclose the first communication link such as LAN and xDSL; however, Locklear fail to disclose the first communication link is a community antenna television (CATV) network link, a wireless network link.

It would have been obvious to one of the ordinary skill in the art at the time of the invention was made to use either the CATV or wireless network link depending on the choice of implementation, and still achieve the same end results.

Allowable Subject Matter

17. Claim 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(11) Response to Argument

Appellant has chosen to group the claims into 6 groups for argument:

Group I: Claims 1-7 and 11-12.

Group II: Claims 13-19 and 23-26.

Group III: Claims 28-33.

Group IV: Claims 8-10.

Group V: Claims 20-22.

Group VI: Claim 27.

Regarding to Group 1, pages 8-9 of the Appeal Brief are directed to claim 1.

Appellant argues that Locklear, Jr. et al. fails to disclose, teach, or suggest the first computer is configured to assign at least one virtual connection for each of the first and second computers to enable the first computer to route WAN data traffic across the LAN.

Examiner respectfully disagrees. As to claim 1, Locklear, Jr. et al the first computer is configured to assign at least one virtual connection for each of the first and second computers to enable the first computer to route WAN data traffic across the LAN (Figures 1,2, and 3A; col. 5, lines 37 through col. 6, lines 21).

The followings explain how the virtual connection is established for the first and second computers to enable the first computer to route the WAN data traffic across the LAN. Locklear's invention discloses a communication system 10 (Figure 1) that provides communication between communication devices 12 and 14. The communication system 10 includes an access server 16 that provides devices 14 an access to data network 18 (col. 2, lines 54-58). Furthermore, Locklear's teaches that the data network 18 is part of a wide area network (WAN) that supports a suitable communication technology, such as ATM, frame relay, etc ... (col. 3, lines 23-35). Due to the data network 18 is an ATM network, all traffic to or from ATM network is prefaced with a virtual path identifier (VPI) and virtual channel identifier (VCI). A VPI/VCI pair is considered a single circuit (VC). As a result, the virtual connection is inherently formed when communication between the server 16 and the data network 18 (col. 5, 1st paragraph).

As for the first computer assigns virtual connection to the second computer. During a session handled by access server 16, device 14 may communicate information to device 12. The access server 16 assigns a session and associates an address to be used in subsequent communications associated with the session. Address 203 (Figure 3A) represents the address used by access server 16 to identify communications associated with a session. Moreover, the address 203 may include a VPI and VCI (col. 5, lines 37 through col. 6, lines 21). As the result, the first computer (server 16) assigns the virtual connection to the second device (devices 14).

Regarding to Group II, pages 10-12 of the Appeal Brief are directed to claim 13. Appellant argues that Locklear, Jr. et al. fails to disclose, teach, or suggest using a master computer to assign at least one virtual connection to each computer in communication with the LAN.

Examiner respectfully disagrees. As to claim 13, Locklear, Jr. et al discloses using the master computer (server 16 of Figure 1) to assign at least one virtual connection to each computer (devices 14) in communication with the LAN (Figures 1,2, and 3A; col. 5, lines 37 through col. 6, lines 21).

The following explain how the master computer assigns at least one virtual connection to each computer in communication with the LAN. Locklear's invention discloses a communication system 10 (Figure 1) that provides communication between communication devices 12 and 14. The communication system 10 includes an access server 16 that provides devices 14 an access to data network 18 (col. 2, lines 54-58). Furthermore, Locklear's teaches that the data network 18 is part of a wide area network (WAN) that supports a suitable communication technology, such as

ATM, frame relay, etc...(col. 3, lines 23-35). Due to the data network 18 is an ATM network, all traffic to or from ATM network is prefaced with a virtual path identifier (VPI) and virtual channel identifier (VCI). A VPI/VCI pair is considered a single circuit (VC). During a session handled by access server 16, device 14 may communicate information to device 12. The access server 16 assigns a session and associates an address to be used in subsequent communications associated with the session. Address 203 (Figure 3A) represents the address used by access server 16 to identify communications associated with a session. Moreover, the address 203 may include a VPI and VCI (col. 5, lines 37 through col.6, lines 21). As the result, each of the devices 14 is obtain the virtual connection from the master computer (server 16).

Regarding to Group III, pages 12-16 of the Appeal Brief are directed to claim 28.

Appellant argues that Locklear, Jr. et al. fails to disclose, teach, or suggest means to communicate between the master computer and each remaining device integrated on the LAN and assign at least one virtual connection to each device integrated on the LAN.

Examiner respectfully disagrees. As to claim 28, Locklear, Jr. et al discloses means to communicate between the master computer (server 16 of figure 1) and each remaining device integrated (devices 14 of figure 14) on the LAN (LAN 40) and assign at least one virtual connection to each device integrated on the LAN (Figures 1,2, and 3A; col. 5, lines 37 through col. 6, lines 21).

The following explain the communication between the master computer (server 16) and each remaining device (devices 14) integrated on the LAN and assigns at least one virtual connection to each device integrated on the LAN. Locklear's invention discloses a

communication system 10 (Figure 1) that provides communication between communication devices 12 and 14. The communication system 10 includes an access server 16 that provides devices 14 an access to data network 18 (col. 2, lines 54-58). Furthermore, Locklear's teaches that the data network 18 is part of a wide area network: (WAN) that supports a suitable communication technology, such as ATM, frame relay, etc ... (col. 3, lines 23-35). Due to the data network 18 is an ATM network, all traffic to or from ATM network is prefaced with a virtual path identifier (VPI) and virtual channel identifier (VCI). A VPI/VCI pair is considered a single circuit (VC). During a session handled by access server 16, devices 14 may communicate information to device 12. The access server 16 assigns a session and associates an address to be used in subsequent communications associated with the session. Address 203 (Figure 3A) represents the address used by access server 16 to identify communications associated with a session. Moreover, the address 203 may include a VPI and VCI (col. 5, lines 37 through col. 6, lines 21). As the result, each of the devices 14 from LAN 40 is obtain the virtual connection from the master computer (server 16).

Regarding to Group IV, pages 17-23 of the Appeal Brief are directed to claim 8.
Appellant argues that Locklear, Jr. et al. and Olarig et al. U.S. Patent 6,370,656 fails to identify a proper motivation or suggestion to combine.
In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See **In re Keller, 642F. 2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F. 2d 1091, 231 USPQ 375 (Fed. Cir. 1986)**. Applicant obviously attacks

references individually without taking into consideration based on the teaching of combinations of references as shown above. With respect to Locklear, appellant seems to argue points the examiner has already construed Locklear does not teach while restricting the arguments on the Locklear-Olarig combined to arguments of no motivation.

In response to Appellant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. See **In re Nomiya, 184 USPQ 607 (CCPA 1975)**. However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. See **In re McLaughlin, 170 USPQ 209 (CCPA 1971)**. References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. See **In re Bozek, 163 USPQ 545 (CCPA 1969)**. Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. See **In re Bode, 193 USPQ 12 (CCPA 1977)**. The examiner has admitted in the previous office action that the primary reference by Locklear fails to disclose a master computer and a slave computer are selected from the first and second computers. This non-disclosed limitation is used to prevent the whole system failure by automatically switching/configuring a slave computer as a primary computer while a failure is detected. This architecture is known in the art as a fault tolerant architecture wherein the backup system is take as the primary system

when the primary system is down. To further present evident, the second reference by Olarig is enclosed. Olarig discloses a system including a primary computer and backup computer wherein these computers are configured as a master computer and slave computer in fault tolerant system. In Olarig's invention, the backup computer is re-configured/switched-over in case of failure by detecting/transmitting the heartbeat to primary computer wherein the heartbeat is used to detect the status of an intended computer (col. 1, lines 41 through col. 2, lines 43). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add a fault tolerant architecture as seen in Olarig's invention into Locklear's invention for a master computer and a slave computer are selected from the first and second computers because it would enable to provide a fault tolerant systems that are designed to operate essentially without interruption (col. 1, lines 49-51) by definition.

Appellant argues that Olarig fails to disclose, teach, or suggest wherein a master computer and a slave computer are selected from the first and second computers using one or more initialization algorithms.

Examiner respectfully disagrees. As to claim 8, Appellant does not specify which algorithm is applied. Therefore, as examination standpoint, the examiner interprets the "initialization algorithm" as monitoring a heartbeat between the primary server and the backup server, in the event of failure the backup computer is re-configured/switched-over to primary server wherein the heartbeat is used to detect the status of an intended computer (col. 1, lines 41 through col. 2, lines 43)

Regarding to Group V, pages 23-27 of the Appeal Brief are directed to claim 20.

Appellant argues that Locklear, Jr. et al. and Olarig et al. U.S. Patent 6,370,656 fails to identify a proper motivation or suggestion to combine.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See **In re Keller**, 642F. 2d 413, 208 USPQ 871 (CCPA 1981); **In re Merck & Co.**, 800 F. 2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant obviously attacks references individually without taking into consideration based on the teaching of combinations of references as shown above. With respect to Locklear, appellant seems to argue points the examiner has already construed Locklear does not teach while restricting the arguments on the Locklear-Olarig combined to arguments of no motivation.

In response to Appellant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. See **In re Nomiya**, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. See **In re McLaughlin**, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. See **In re Bozek**, 163 USPQ 545 (CCPA 1969). Every reference relies to some extent on knowledge of persons skilled in the art to

complement that which is disclosed therein. See **In re Bode, 193 USPQ 12 (CCPA 1977)**. The examiner has admitted in the previous office action that the primary reference by Locklear fails to disclose a master computer and a slave computer are selected from the first and second computers. This non-disclosed limitation is used to prevent the whole system failure by automatically switching/configuring a slave computer as a primary computer while a failure is detected. This architecture is known in the art as a fault tolerant architecture wherein the backup system is take as the primary system when the primary system is down. To further present evident, the second reference by Olarig is enclosed. Olarig discloses a system including a primary computer and backup computer wherein these computers are configured as a master computer and slave computer in fault tolerant system. In Olarig's invention, the backup computer is re-configured/switched-over in case of failure by detecting/transmitting the heartbeat to primary computer wherein the heartbeat is used to detect the status of an intended computer (col. 1, lines 41 through col. 2, lines 43). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add a fault tolerant architecture as seen in Olarig's invention into Locklear's invention for a master computer and a slave computer are selected from the first and second computers because it would enable to provide a fault tolerant systems that are designed to operate essentially without interruption (col. 1, lines 49-51) by definition.

Appellant argues that Olarig fails to disclose, teach, or suggest wherein a master computer and a slave computer are selected from the first and second computers using one or more initialization algorithms.

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Examiner respectfully disagrees. As to claim 20, Appellant does not specify which algorithm is applied. Therefore, as examination standpoint, the examiner interprets the "initialization algorithm" as monitoring a heartbeat between the primary server and the backup server, in the event of failure the backup computer is re-configured/switched-over to primary server wherein the heartbeat is used to detect the status of an intended computer (col. 1, lines 41 through col. 2, lines 43).

Regarding to Group IV, pages 27-31 of the Appeal Brief are directed to claim 27.

Claim 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In summary, the references can and should be combined in the manner noted in the rejection shown above.

Referring to Group I, claims 2-7, and 11-12 are dependent on claim 1 and thus are not patentable at least for the reasons set forth above claim 1.

Referring to Group II, claims 14-19, and 23-26 are dependent on claim 13 and thus are not patentable at least for the reasons set forth above claim 13.

Referring to Group III, claims 29-33 are dependent on claim 28 and thus are not patentable at least for the reasons set forth above claim 28.

Referring to Group IV, claims 9-10 are dependent on claim 8 and thus are not patentable at least for the reasons set forth above to claim 8.

Referring to Group V, claims 21-22 are dependent on claim 20 and thus are not patentable at least for the reasons set forth above to claim 20.

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Referring to Group VI, claim 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Therefore, claims 1-26, and 28-33 remain/stand rejected as shown above.

Respectfully submitted,


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May 11, 2004

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